Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matters of	)	
	)	
IP-Enabled Services	)	WC Docket No. 04-36
	)	
E911 Requirements for IP-Enabled Service Providers	)	WC Docket No. 05-196
	)	

COMMENTS OF VERIZON

The Verizon telephone companies[1] ("Verizon") support the Commission's efforts to ensure that customers of Voice over Internet Protocol (VoIP) services have the benefit of robust E911 capabilities. The Commission's June 3 Order[2] in the above-captioned dockets clearly conveys the Commission's commitment to the safety needs of VoIP users, and sets out requirements for the industry to make available capabilities to meet those needs.

The industry is working hard on two parallel paths – implementing solutions to meet the mandates of the Commission's June 3 Order, and developing more advanced solutions to meet the particular needs of VoIP users and to take advantage of the capabilities VoIP enables. The Commission should monitor these efforts, and continue its practice of reaching out to industry forums, in order to remain fully informed of industry efforts, including proposed solutions, testing for technical and economic feasibility and usefulness, and any issues presented. By doing so, the Commission will encourage prompt deployment of useful and feasible solutions, and will be in a position to take further steps to facilitate implementation of future solutions, if needed.

---

[1] The Verizon telephone companies are the affiliated local exchange and long distance carriers of Verizon Communications Inc. listed on Attachment A.

[2] IP-Enabled Services; E911 Requirements for IP-Enabled Service Providers, 20 FCC Rcd 10245 (2005) ("June 3 Order" or "NPRM").

At the same time, the Commission will avoid imposing requirements that do not bring additional benefits to consumers, or that bring costs that outweigh the benefits.

1. The Commission should monitor industry progress toward developing more advanced E911 solutions for VoIP, including user location technology, in order to facilitate implementation of useful and feasible solutions. The Commission's June 3 Order clearly and urgently conveyed the Commission's commitment to making E911 capabilities available to consumers of VoIP services, and imposed stringent deadlines on the industry for achieving that goal. The industry is now working diligently on an accelerated time table to implement and deploy E911 capabilities for VoIP. As discussed in more detail below, the industry faces significant challenges in complying with the June 3 Order. For example, Verizon's VoiceWing service, like a number of other VoIP services, is dependent on third parties in order to provide E911 capabilities to its customers.[3] As another example, equipment manufacturers have not developed the ability to provide E911 capability for nomadic users connected to IP-PBXs, and such capability is not available today for TDM-based PBXs. If the Commission's E911 order is held to apply to these services, there is a danger that business customers may not be able to take advantage of the capabilities and efficiencies of some IP-enabled services until such solutions are developed.

In light of these challenges and the ongoing efforts by the industry and public safety community to provide E911 capabilities, the Commission should not expand the scope and requirements of the June 3 Order. Instead, the Commission should monitor industry implementation of E911 capabilities to ensure that current capabilities are made available to all customers of interconnected VoIP services nationwide. Imposing new requirements at this time

[3] *See* Letter from Kathleen Grillo, Verizon, to Marlene Dortch, FCC, WC Docket Nos. 04-36 and 05-196, attachment at 7 (filed July 12, 2005).

runs the risk that development and deployment of solutions will be focused in high density population centers and that other areas of the country may have no ability to obtain VoIP service at all, if providers are unable to meet Commission requirements in those locations.

For these reasons, the Commission should carefully consider the implications of any proposed expansion of the scope of the Order on all affected services to avoid unintended consequences, and to make sure that expanded requirements are technically feasible and achievable in a reasonable time frame. In addition, any proposed expansion of the scope or requirements of the Order should be discussed among public safety officials, the industry, and the Commission to make sure that the impacts on all participants in providing E911 service are taken into account.

The most productive way for the Commission to facilitate implementation of current E911 capabilities ubiquitously, as well as development and deployment of more advanced E911 capabilities, is to monitor developments, including by reaching out to industry groups and forums that are involved in developing new and more advance solutions (as the Commission does today). By doing so, the Commission will be informed about promising technologies, their progress toward technical and economic feasibility, the promulgation of standards and incorporation into commercially viable products. The Commission will also be aware of the issues and pitfalls posed by new technologies.

Although several industry groups are involved in efforts to develop viable automatic location technologies for VoIP services, there are currently no workable solutions for automatically locating nomadic VoIP customers. The Commission's NPRM mentioned a number of potential solutions. Two categories of solutions that are under discussion are various

GPS technologies and some kind of "smart jack" solution. NPRM ¶ 57. Neither is currently workable.

GPS technologies are unsuitable presently because it can be difficult consistently to maintain the required satellite communication inside buildings – which is where many VoIP services are likely to be used. In addition, GPS solutions would need to interface with 911 databases in order to relate geographic coordinates to specific street address locations. Smart jack solutions have many unknowns – will the jack work with all routers? What is the feasibility of modifying 100 million broadband connections? Because there are currently no workable solutions, the Commission should not require that all terminal adapters or other equipment used to provide interconnected VoIP service be capable of providing automatic location information by June 1, 2006. As discussed above, there is still much work to do to ensure that the current VoIP E911 capability is deployed ubiquitously nationwide; the Commission should not distract from achievement of that important goal by imposing new requirements at this time.

2. The Commission should address certain issues raised by the June 3 Order. The Commission should address issues raised by the requirement to allow end users to update their registered location. The Commission should facilitate alignment among various VoIP providers, third party database vendors, and the public safety community on how to validate locations provided by customers. Today, some entities use postal validation, while others use Master Street Address Guides. And customers may not know the "valid" address of new locations they attempt to register under either method. For example, a customer may not know whether the database will accept "Sixth Avenue" or "Avenue of the Americas" in New York City. Because of issues such as these, the Commission should not impose standards on providers for updating

registered locations. Similar standards do not exist for address updates for traditional E911 service.

The Commission asked a number of other questions concerning E911 service for VoIP. Verizon addresses certain critical issues here. First, in areas where the PSAP is not connected to a selective router, VoIP providers should connect to the PSAP in the same way that CMRS carriers and wireline telephone providers connect. In most cases, such connections involve a direct trunk interface to the PSAP. In Verizon's footprint, there are only a small number of PSAPs where direct connection would be required.

Second, the Commission should recommend that VoIP providers consider deploying redundancy for E911 service, but should not impose a requirement. Verizon believes that redundancy for the public safety network is very important, and therefore is rolling out product offerings that include redundancy for the public safety customers. In the end, however, the level of redundancy implemented in any particular location is the responsibility of the public safety provider, and the VoIP provider may have no control over it. Today, there is no regulation requiring wireline carriers or CMRS providers to provide redundancy. The Commission should not impose requirements on VoIP providers that do not apply to wireline or CMRS competitors.

3. The Commission should not impose additional customer notification or reporting requirements. The June 3 Order required VoIP providers to undertake significant customer notification efforts. Verizon agrees that customers should have full and complete notice of the limitations of a VoIP service's emergency response capability. As detailed in Verizon's August 10 report, Verizon has been providing customers with clear, prominent, and extensive notification from the day its VoiceWing service was launched. However, the June 3 Order more than adequately ensures that customers have full and fair notice, and further requirements for

notification are not necessary, and might be counter-productive, if customers simply ignore a flood of required notices.

Similarly, the June 3 Order imposes significant reporting requirements on VoIP providers. Those reports will give the Commission detailed insight into the efforts of VoIP providers to provide notification and E911 capability to their customers. As discussed above, the Commission should also continue to reach out to industry groups and forums, which will allow them to be informed about industry and technology developments.

4. The Commission should adopt customer privacy protections that mirror those provided to customers of wireline and CMRS providers. Customers of interconnected VoIP services should enjoy the same privacy protections as customers of wireline and wireless services. These services compete directly with each other and provide similar functions and features, and thus should enjoy the same protections in these areas. For the same reasons, providers of interconnected VoIP services should have the same requirements and protections associated with obtaining and transmitting customer information for 911 purposes as wireline and wireless carriers do.

Providers of interconnected VoIP services should also enjoy the same protection from liability in connection with the provision of 911/E911 services as wireline and wireless carriers do. To the extent the Commission needs additional authority to provide such protection, *see* June 3 Order at ¶¶ 54-55, the Commission should encourage Congress to enact protection for VoIP providers equal to the protection provided for wireline and wireless carriers.

5. Providers of IP-Enabled services should be required to provide access to people with disabilities as soon as such access is technically feasible and readily achievable. Verizon agrees that individuals with disabilities should enjoy the benefits of VoIP and will work with

vendors and the industry so that both its VoIP offerings can be compatible with TTY equipment.[4] At this time, however, there are substantial technical challenges involved in providing teletypewriter ("TTY")-based services over IP networks. This is because the technical standards required for successful TTY service are exacting, and the public internet does not meet these standards. Only a carefully managed network, usually private, can control and account for packet loss and "jitter" such that TTY service may be successful.

Verizon will work with its vendors and other equipment providers to develop a solution to the technical challenges associated with providing TTY service over the public internet. The Commission should adopt an approach similar to the approach it took when the wireless industry faced technical challenges in providing TTY service. In that case, although TTY devices worked well with analog wireless phones, they were incompatible with digital wireless services. *See Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, 12 FCC Rcd 22665, ¶ 45 (1997). The Commission therefore decided that the most sensible approach would be to allow the wireless industry and the disability community an opportunity to identify the relevant issues and explore how to resolve them. *Id.* ¶ 43 (noting that "it would be prudent for the wireless industry, equipment manufacturers . . . and the disability community to determine the extent of issues pertaining to the provision of these E911 features

[4] Verizon, in support of the principles underlying 47 U.S.C. § 255, has adopted a set of "Universal Design Principles" that it will consider with respect to the VoIP services and products it will offer. Specifically, these principles provide that that Verizon will: (1) provide quality services that can reasonably accommodate a broad range of diverse users, including individuals with disabilities; (2) review existing services to determine which services should be more accessible; (3) design and develop services, to the extent readily achievable, so as to be accessible to a broad range of diverse users; (4) market and provision its services in a manner consistent with accessibility by a broad range of diverse users; (5) employ these Universal Design Principles Verizon-wide, in relationships with customers, employees, shareholders, and suppliers. In particular, Verizon will work with vendors to help develop and track evolving standards regarding customer specialized CPE and peripheral devices that will be necessary to ensure that the disability community has better access to new emerging services such as VoIP.

for TTY calls and whether these issues might be resolved by agreements between the interested parties or by standards bodies"). The Commission should adopt the same approach for VoIP.

Conclusion

The June 3 Order clearly conveyed the Commission's concern with ensuring that customers of interconnected VoIP services can benefit from E911 capabilities, and established strict requirements for achieving that goal. The industry is working diligently to deploy E911 for VoIP and, on a parallel track, continues to explore the development of more advanced solutions to meet the particular needs of VoIP users and to take advantage of the capabilities VoIP enables. The Commission can facilitate these efforts by continuing its practice of reaching out to industry forums, in order to remain fully informed of industry efforts, and by avoiding the imposition of requirements that do not bring additional benefits to consumers, or that bring costs that outweigh the benefits.

Respectfully submitted,

Leslie V. Owsley

Michael E. Glover
Of Counsel

Karen Zacharia
Leslie V. Owsley
1515 North Courthouse Road
Suite 500
Arlington, Virginia 22201

(703) 351-3158

Attorneys for the Verizon telephone companies

THE VERIZON TELEPHONE COMPANIES

The Verizon telephone companies are the local exchange and long distance carriers affiliated with Verizon Communications Inc. These are:

Bell Atlantic Communications, Inc. d/b/a Verizon Long Distance
Contel of the South, Inc. d/b/a Verizon Mid-States
GTE Southwest Incorporated d/b/a Verizon Southwest
The Micronesian Telecommunications Corporation
NYNEX Long Distance Company d/b/a Verizon Enterprise Solutions
Verizon California Inc.
Verizon Delaware Inc.
Verizon Florida Inc.
Verizon Maryland Inc.
Verizon New England Inc.
Verizon New Jersey Inc.
Verizon New York Inc.
Verizon North Inc.
Verizon Northwest Inc.
Verizon Pennsylvania Inc.
Verizon Select Services Inc.
Verizon South Inc.
Verizon Virginia Inc.
Verizon Washington, DC Inc.
Verizon West Coast Inc.
Verizon West Virginia Inc.